======= WPI =======

TI - Processing of tea leaf - by drying, twisting, cutting, mincing, fermenting, drying and sepn. of fractions for prodn. of tea concentrates

AB - SU1678276 The proposed method comprises drying tea leaves to the moisture content 64-65%, twisting for 35-45 min., cutting, milling, fermenting and drying. After drying, semi-finished prod. is classified into fraction, with starting material for prodn. of concentrates sepd. from the last two fractions, milled and classified. The starting material for prodn. of tea concentrates is treated in disintegrator and divided into fine and coarse fractions. The fine fraction is used in the prodn. of granulated tea, while the coarse fraction is used to produce tea concentrates and non-alcoholic tonic-action drinks.

- USE/ADVANTAGE - In food industry, as a method for primary processing of tea leaves. The method increases yield of high grade products. Bul.35/ 23.9.91(Dwg. 0/0)

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ГОСУДАРСТВЕННЫЙ КОМИТЕТ ПО ИЗОБРЕТЕНИЯМ И ОТКРЫТИЯМ ПРИ ГКНТ СССР

ОПИСАНИЕ ИЗОБРЕТЕНИЯ

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(71) Всесоюзное научно-производственное объединение по чаю, субтропическим культурам и чайной промышленности
(72) Л.М.Харебава, Т.О.Ревишвили и З.Ю.Дзнеладзе
(53) 663.95 (088.8)
(56) Хоперия Р.М. Технология производства чая. – М.: ВО Агропромиздат, 1988, с. 25–26.

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(54) СПОСОБ ПЕРЕРАБОТКИ ЧАЙНОГО ЛИСТА

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(57) Изобретение может быть использовано на чайных фабриках первичной переработки. Целью изобретения является повышение выхода качественных сортов. Чайный лист завяливают, скручивают, режут, измельчают, ферментируют и сушат. После сушки полуфабрикат чая сортируют с выделением сырья для чайных концентратов из последних двух фракций, измельченных и подвергнутых сортировке. Сырье для чайных концентратов дезинтегрируют и сортируют с получением мелкой и крупной фракций. Дезинтегрированная мелкая фракция используется для выработки гранулированного чая, а крупная – для чайных концентратов и тонизирующих безалкогольных чайных напитков. 2 табл.

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Изобретение относится к пищевой промышленности и может быть использовано на чайных фабриках первичной переработки.

Целью изобретения является повышение выхода качественных сортов.

Чайный лист хозяйственного сбора завяливают до 64–65%-ной остаточной влажности, завяленный лист скручивают в роллере двойного действия в течение 35–45 мин, сортируют, после чего мелкую отсортированную фракцию ферментируют, а крупную режут и скручивают повторно в течение 40 мин. Резано-скрученная масса сортируется. Отсортированная крупная фракция непосредственно сушится, а мелкая ферментируется и сушится. Полуфабрикаты мелкой и крупной фракции сортируются на чаесортировочной машине "Комбайн", при этом чай последнего номера комбайна (17–18), полученный при повторном сортировании, – единое сырье для чайных концентратов – дезинтегрируется. Дезинтегрированный чай сортируется на две фракции – мелкую и крупную. Мелкая фракция используется для выработки гранулированного чая, а крупная – для сырья чайных концентратов.

Пример 1. Чайный лист с содержанием огрубевшей и грубой фракций до 20% в количестве 900 кг завяливают до 63%-ной остаточной влажности. Завяленный лист

Таблица 1

Показатели	Известный способ	Предложенный способ
Выход готовой продукции, %	80	80
высших и первых сортов	54,0	56,0
низкосортных видов продукции (2/1, 2/2, 2/3, IIIсорт)	26,0	–
Выход сырья для чайных концентратов, %	20,0	20,0
Средневзвешенный аромат и вкус, балл	3,25	3,50
Среднесдаточная цена 1 кг продукции, руб	5,50	5,70
Экстрактивные вещества (среднее), %	33,6	35,2
Танин (среднее), %	8,7	9,4

Таблица 2

Показатели	Известный способ	Предложенный способ
Выход готовой продукции, %	78,0	80,0
высших и первых сортов	58,0	60,0
низкосортных видов продукции	20,0	–
гранулированный чай I сорта	–	20,0
выход сырья для чайных концентратов	22,0	20,0
Средневзвешенный аромат и вкус, балл	3,27	3,55
Среднесдаточная цена 1кг готовой продукции	5,30	5,60

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Patent specification

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METHOD FOR PROCESSING TEA LEAVES

The invention can be used in tea factories that perform the primary processing. The aim of the invention is to increase the yield of high-quality grades. The tea leaves are withered, rolled, cut, reduced in size, fermented and dried. After drying, the semi-finished tea is graded and the starting material for tea concentrates from the last two fractions is separated, reduced in size and graded. The starting material for tea concentrates is disintegrated and graded into small and large fractions. The disintegrated small fraction is used for the processing of granulated tea, and the large fraction is used for tea concentrates and non-alcoholic tonic tea drinks.

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The invention relates to the food industry and can be used in tea factories that perform the primary processing.

The aim of the invention is to increase the yield of high-quality grades.

The tea leaves from the harvest are withered to a residual moisture content of approximately 64-65%, the withered leaves are rolled on a double action roller for 35 to 45 minutes and are graded, after which the small graded fraction is fermented and the large fraction is cut and rolled repeatedly for 40 minutes. The cut and rolled mass is graded. The graded large fraction is dried immediately, and the small fraction is fermented and dried. The semi-finished small and large fractions are graded on the "Combine" tea-grading machine and the final size tea from the combine (17-18), which is obtained during the repeated grading and is the sole starting material for tea concentrates, is disintegrated. The disintegrated tea is graded

into two fractions, a large and a small one. The small fraction is used for the processing of tea granules, and the large fraction as the starting material for tea concentrates.

Example 1

Tea leaves containing approximately 20% per 900 kg of the coarse and rough fractions are withered to a residual moisture content of approximately 63%. The withered leaves are rolled on three rollers for their first rolling, and after 35 minutes of rolling the mass is graded on the green grading machine; the small fraction (siftings) is fermented, and the large fraction is cut. The cut mass is rolled for 40 minutes, after which it is graded on the green grading machine. The small fraction and the residual fraction are dried. The semi-finished products from the small and the large fractions are graded on the "Combine" tea-grading machine, and during the first run of the semi-finished product, the final sizes (17 and 18) of tea are cut and then graded on the combine. The tea obtained from the 17^{th} and 18^{th} sizes after repeated grading, which is the sole starting material for tea concentrates, is passed through the disintegrator. The disintegrated tea is graded on the flat-grading machine, where sieve No. 44 is used. The small fraction obtained is used for the processing of tea granules, and the large fraction for tea concentrates.

Example 2

Tea leaves with a content of approximately 30% coarse and rough fractions per 900 kg are withered to a residual moisture content of approximately 64%. The withered leaves are rolled on three rollers in the first rolling for 40 minutes. Further processing is as in Example 1.

Example 3

Tea leaves with a content of approximately 40% coarse and rough fractions per 900 kg are withered to a residual moisture content of approximately 65% on three rollers during the first rolling for 45 minutes. Further processing is performed as in Example 1.

The quality indices for the produce processed by the known and proposed methods are shown in Table 1.

The data in Table 1 show that the proposed scheme for processing tea leaves into black tea ensures the improvement of the organoleptic and chemical indices of the final product.

Example 4

Tea leaves from the harvest (900 kg) are fixed using one of the known methods of fixing and reduced to a residual moisture content of approximately 62%. The fixed leaves are rolled on double action rollers for 65 minutes. The rolled mass is dried. The semi-finished green loose unpressed tea is graded as in Example 1.

The quality indices for the green tea processed in accordance with the known and proposed methods are shown in Table 2.

The proposed method of production of tea ensures the rational and maximum utilisation of the potential possibilities of the raw material, and in addition, thanks to the use of the disintegration process for the sole starting material for tea concentrates, the yield of the first grades of tea, the creation of waste-free produce in the processing of the tea leaves in the tea factories for primary processing, the exclusion of the processing of low grade (difficult to sell) types of production, the simplification of the technical production of tea granules made from dried types of tea produce and the improvement of the quality indices of the end product are all increased.

Claim

A method of processing tea leaves, comprising withering the tea leaves, rolling, reduction in size by cutting, fermentation, drying, dry grading with the allocation of the last two fractions, their reduction in size and repeated grading of the semi-finished tea obtained and the starting material for tea concentrates, characterised in that, with the aim of increasing the yield of high-quality grades, the starting material for tea concentrates is disintegrated and the two fractions obtained are again graded, the small fraction of which is sent for granulation.

Table 1

Indices	Known method	Proposed method
Yield of prepared produce, %	80	80
Highest and first grades	54.0	56.0
Lowest grade types of produce (2/1, 2/2, 2/3, 3rd grade)	26.0	-
Raw material yield for tea concentrates, %	20.0	20.0
Mean aroma and taste, score	3.25	3.50
Mean supply price for 1 kg prepared produce, roubles	5.50	5.70
Extracts (mean), %	33.6	35.2
Tannin (mean), %	8.7	9.4

Table 2

Indices	Known method	Proposed method
Yield of prepared produce, %	78.0	80
Highest and first grades	58.0	60.0
Lowest grade types of produce	20.0	-
Granulated tea 1st grade	-	20.0
Raw material yield for tea concentrates	22.0	20.0
Mean aroma and taste, score	3.27	3.55
Mean supply price for 1 kg prepared produce, roubles	5.30	5.60